

872C WorldProx™ 3-Wire DC

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC Cable Style
8, 12, 18, 30mm
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872C DC
Quick-Disconnect Micro Style
8, 12, 18, 30mm
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872C DC
Quick-Disconnect Mini Style
18, 30mm
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872C DC Pico
Quick-Disconnect Style
8mm
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872C DC Pico
Quick-Disconnect Style
6.5mm

Specifications

Load Current	≤200mA
Leakage Current	≤10μA
Operating Voltage	10–30V DC
Voltage Drop	≤1.6V; ≤2.4V (8mm only)
Repeatability	≤2% (≤5% 6.5mm)
Hysteresis	10% typical
Reverse Polarity Protection	Incorporated
Transient Noise Protection	Incorporated
Short Circuit Protection	Incorporated
Overload Protection	Incorporated
False Pulse Protection	Incorporated
Approvals	UL listed, c-UL certified for Canada, and CE marked for all applicable directives (6.5mm is only CE marked)
Enclosure	NEMA 1, 2, 3, 4, 6P, 12, 13 IP67 (IEC529) Nickel-plated brass barrel, plastic face (PBT)
Connections	Cable: 2m (6.5ft) length, 4.4mm (0.175in) diameter 3-conductor #26AWG PVC Quick-Disconnect: 4-pin mini style 4-pin micro style 3-pin pico style
LED	Red: Output energized, 360° visibility
Operating Temperature	-25°C to +70°C (-13°F to +158°F)
Shock	30g, 11ms
Vibration	55Hz, 1mm amplitude, 3 planes

Correction Factors

Target Material	Correction Factors
Steel	1.0
Stainless Steel	0.7–0.8
Brass	0.4–0.5
Aluminum	0.3–0.4
Copper	0.2–0.3



Features

- 3-wire operation
- 3-conductor, 3- or 4-pin connection
- 10–30V DC
- Normally open or normally closed
- Reverse polarity, short circuit, overload, false pulse, and transient noise protection
- UL listed, c-UL listed, and CE marked for all applicable directives

Allen-Bradley Replacements

Inductive Proximity Sensors
872C WorldProx™ 3-Wire DC
 Plastic Face/Threaded Nickel-Plated Brass Barrel

Product Selection

Barrel Dia.	Nominal Sensing Distance mm (in)	Shielded	Output Configuration		Switching Frequency (Hz)	Catalog Number			
						Cable Style	Mini QD Style	Micro QD Style	Pico QD Style
6.5mm	2.0 (0.08)	Y	N.O.	NPN	2000	872C-MM1NN7-E2			872C-MM1NN7-P3
				PNP		872C-MM1NP7-E2			872C-MM1NP7-P3
			N.C.	NPN		872C-MM1CN7-E2			872C-MM1CN7-P3
				PNP		872C-MM1CP7-E2			872C-MM1CP7-P3
8mm	2 (0.08)	Y	N.O.	NPN	2500	872C-D2NN8-E2	—	872C-D2NN8-D4	872C-D2NN8-P3
				PNP		872C-D2NP8-E2	—	872C-D2NP8-D4	872C-D2NP8-P3
			N.C.	NPN		872C-D2CN8-E2	—	872C-D2CN8-D4	872C-D2CN8-P3
				PNP		872C-D2CP8-E2	—	872C-D2CP8-D4	872C-D2CP8-P3
	3 (0.12)	N	N.O.	NPN		872C-D3NN8-E2	—	872C-D3NN8-D4	872C-D3NN8-P3
				PNP		872C-D3NP8-E2	—	872C-D3NP8-D4	872C-D3NP8-P3
			N.C.	NPN		872C-D3CN8-E2	—	872C-D3CN8-D4	872C-D3CN8-P3
				PNP		872C-D3CP8-E2	—	872C-D3CP8-D4	872C-D3CP8-P3
12mm	3 (0.12)	Y	N.O.	NPN	2000	872C-D3NN12-E2	—	872C-D3NN12-D4	—
				PNP		872C-D3NP12-E2	—	872C-D3NP12-D4	—
			N.C.	NPN		872C-D3CN12-E2	—	872C-D3CN12-D4	—
				PNP		872C-D3CP12-E2	—	872C-D3CP12-D4	—
	4 (0.16)	N	N.O.	NPN		872C-D4NN12-E2	—	872C-D4NN12-D4	—
				PNP		872C-D4NP12-E2	—	872C-D4NP12-D4	—
			N.C.	NPN		872C-D4CN12-E2	—	872C-D4CN12-D4	—
				PNP		872C-D4CP12-E2	—	872C-D4CP12-D4	—
18mm	5 (0.20)	Y	N.O.	NPN	1000	872C-D5NN18-E2	872C-D5NN18-N4	872C-D5NN18-D4	—
				PNP		872C-D5NP18-E2	872C-D5NP18-N4	872C-D5NP18-D4	—
			N.C.	NPN		872C-D5CN18-E2	872C-D5CN18-N4	872C-D5CN18-D4	—
				PNP		872C-D5CP18-E2	872C-D5CP18-N4	872C-D5CP18-D4	—
	8 (0.31)	N	N.O.	NPN		872C-D8NN18-E2	872C-D8NN18-N4	872C-D8NN18-D4	—
				PNP		872C-D8NP18-E2	872C-D8NP18-N4	872C-D8NP18-D4	—
			N.C.	NPN		872C-D8CN18-E2	872C-D8CN18-N4	872C-D8CN18-D4	—
				PNP		872C-D8CP18-E2	872C-D8CP18-N4	872C-D8CP18-D4	—
30mm	10 (0.39)	Y	N.O.	NPN	500	872C-D10NN30-E2	872C-D10NN30-N4	872C-D10NN30-D4	—
				PNP		872C-D10NP30-E2	872C-D10NP30-N4	872C-D10NP30-D4	—
			N.C.	NPN		872C-D10CN30-E2	872C-D10CN30-N4	872C-D10CN30-D4	—
				PNP		872C-D10CP30-E2	872C-D10CP30-N4	872C-D10CP30-D4	—
	15 (0.59)	N	N.O.	NPN		872C-D15NN30-E2	872C-D15NN30-N4	872C-D15NN30-D4	—
				PNP		872C-D15NP30-E2	872C-D15NP30-N4	872C-D15NP30-D4	—
			N.C.	NPN		872C-D15CN30-E2	872C-D15CN30-N4	872C-D15CN30-D4	—
				PNP		872C-D15CP30-E2	872C-D15CP30-N4	872C-D15CP30-D4	—
Recommended Standard QD Cordset (-6F = 1.8m (6ft), -2 = 2m (6.5ft))						889N-F4AFC-6F	889D-F4AC-2	889P-F3AB-2	

QD Cordsets and Accessories

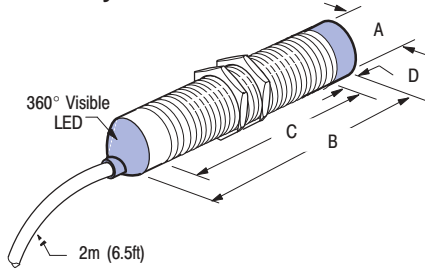
Description	Page Number
Other Cordsets Available	7-8, 7-41, 7-88
Terminal Chambers	7-20
Mounting Brackets	2-186 - 2-190
End Caps	2-196
Mounting Nuts	2-197 - 2-198

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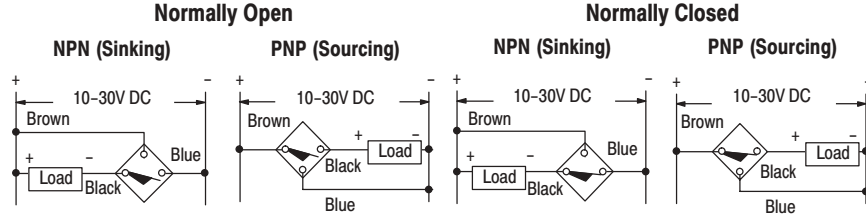
Plastic Face/Threaded Nickel-Plated Brass Barrel

Dimensions—mm (inches)

Cable Style

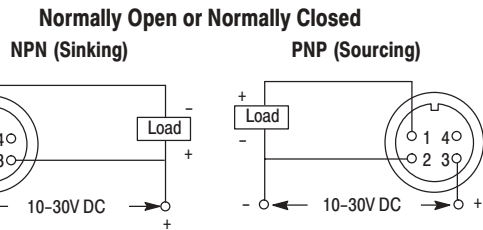
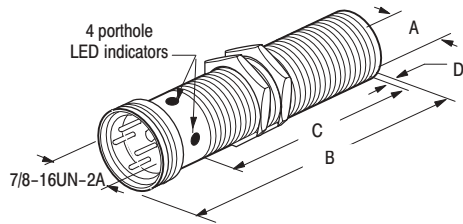


Wiring Diagrams



Thread Size	Smooth Diameter	Shielded	mm (inches)			
			A	B (max)	C (min)	D (max)
—	6.5	Y	6.5 (0.26)	33 (1.3)	—	—
M8 X 1	—	Y	8.0 (0.31)	33.7 (1.33)	32.5 (1.28)	0.5 (0.02)
		N		32.0 (1.26)		
M12 X 1	—	Y	12 (0.47)	50.8 (2.00)	46.7 (1.84)	—
		N		58.7 (2.31)		7.9 (0.31)
M18 X 1	—	Y	18 (0.71)	50.8 (2.00)		—
		N		63.0 (2.48)		12.2 (0.48)
M30 X 1.5	—	Y	30 (1.18)	50.8 (2.00)	—	
		N		63.0 (2.48)	12.2 (0.48)	

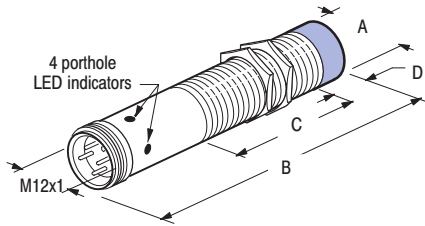
Mini QD Style



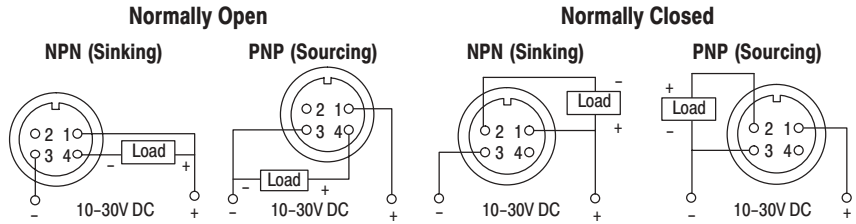
Thread Size	Shielded	mm (inches)			
		A	B (max)	C (min)	D (max)
M18 X 1	Y	18.0 (0.71)	65.0 (2.56)	38.1 (1.50)	—
	N		76.5 (3.01)		12.2 (0.48)
M30 X 1.5	Y	30.0 (1.18)	65.0 (2.56)	38.1 (1.50)	—
	N		76.5 (3.01)		12.2 (0.48)

Allen-Bradley Replacements

Dimensions—mm (inches)
Micro QD Style

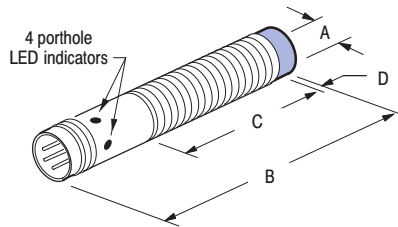


Wiring Diagrams

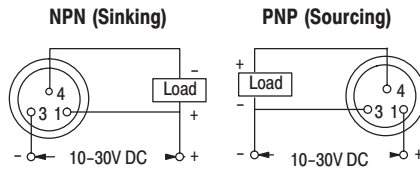


Thread Size	Shielded	mm (inches)			
		A	B (max)	C (min)	D (max)
M8 X 1	Y	8.0 (0.31)	58.0 (2.28)	27.5 (1.08)	0.5 (0.02)
	N			23.0 (0.91)	5.0 (0.20)
M12 X 1	Y	12.0 (0.47)	65.0 (2.56)	38.1 (1.50)	—
	N				72.4 (2.85)
M18 X 1	Y	18.0 (0.71)	65.0 (2.56)		—
	N				76.5 (3.01)
M30 X 1.5	Y	30.0 (1.18)	65.0 (2.56)	—	
	N			76.5 (3.01)	12.2 (0.48)

Pico QD Style



Normally Open or Normally Closed



Thread Size	Smooth Diameter	Shielded	mm (inches)			
			A	B (max)	C (min)	D (max)
—	6.5	Y	6.5 (0.26)	49 (1.93)	—	—
M8 X 1	—	Y	8.0 (0.31)	50.3 (1.98)	34.0 (1.34)	0.3 (0.01)
		N	8.0 (0.31)	50.0 (1.97)	29.0 (1.14)	5.0 (0.20)